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=> d his

     (FILE 'HOME' ENTERED AT 12:28:43 ON 21 MAR 2000)

     FILE 'CA' ENTERED AT 12:28:54 ON 21 MAR 2000
                E NITTA HIDEICHI/IN
L1           10 S E2-E4
                E YAMASHITA HIROYUKI/IN
L2          127 S E3
                E SAITO JUN/IN
L3          210 S E3
L4            0 S DRY(2W) NEUTRALI?(P)(ACID# OR PRECURSOR# OR SULPHON? OR
SULFO
L5            1 S DRY(2W) NEUTRALI?(P)(ACID# OR PRECURSOR# OR SULPHON? OR
SULFO
L6          195 S  NEUTRALI?(P)(ACID# OR PRECURSOR# OR SULPHON? OR SULFON? OR
S
L7        74659 S DETERGENT# OR TENSIDE# OR DETERSIVE#
L8            4 S L6 AND L7
L9         1209 S  NEUTRALI?(P)(PRECURSOR# OR SULPHON? OR SULFON? OR SULFURIC
O
L10         188 S L7 AND L9
L11         188 S L10 NOT L8
L12        7227 S (BULK OR APPARENT)(P)DENSIT?
L13          14 S L11 AND L12

     FILE 'USPATFULL' ENTERED AT 13:38:25 ON 21 MAR 2000
L14          12 S L4
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L1 ANSWER 8 OF 10 CA COPYRIGHT 2000 ACS
AN 128:193996 CA
TI Detergent particles, process for preparing the same, and detergent composition having high bulk density
IN **Nitta, Hideichi**; Yamashita, Hiroyuki; Saito, Jun
PA Kao Corporation, Japan; Nitta, Hideichi; Yamashita, Hiroyuki; Saito, Jun
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9810052	A1	19980312	WO 1997-JP3095	19970903
	W: BR, CN, JP, US, VN				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 936269	A1	19990818	EP 1997-939162	19970903
	R: DE, FR, GB				
	CN 1235633	A	19991117	CN 1997-199409	19970903
PRAI	JP 1996-257416	19960906			
	WO 1997-JP3095	19970903			

=> d 8 l1 ab

L1 ANSWER 8 OF 10 CA COPYRIGHT 2000 ACS
AB The detergent particles comprise a nonsoap, anionic surfactant (A) and an inorg. salt (B) not detected by X-ray diffractometry at the B/A molar ratio of (0.1-1.0):1; and are manufd. by a process comprising the step of dry neutralizing a liq. acid precursor of A with a water-sol. solid alk. inorg. material, wherein an inorg. acid is used in an amt. of 0.1-1.0 mol per mol. of the liq. acid precursor of the A. The detergent particles have very low particle tackiness and more pores, and their use results in the formation of a detergent compn. with a small diam. and a high bulk d. in a high yield. Thus, mixing Na tripolyphosphate particles (diam. 11.2 .mu.m) 7.0 with Na2CO3 (diam. 56.1 .mu.m) 12.61 and a fluorescent agent 0.11 using high-speed mixer for 1 min, adding water 0.20, mixing for 1.5 min, combining with a mixt. of linear alkylbenzenesulfonic acid (mol. wt. 322) 10.92 and 98% H2SO4 0.23 part over 4 min, mixing, adding a 40% acrylic acid-maleic acid copolymer (0.18 part as active component), mixing, adding zeolite 4.20 parts and mixing gave particles with fraction passed a 1400-.mu.m screen 75.3%, av. particle diam. 633 .mu.m, bulk d. 760 g/L, flowability 6.2 s and color rating 92.4. A final detergent was obtained from the particles, a perfume and an enzyme.

L5 1 DRY(2W) NEUTRALI?(P)(ACID# OR PRECURSOR# OR SULPHON? OR SULFON?
OR SULFURIC OR SULPHURIC)(P)(ALKALI OR HYDROXIDE# OR CARBONATE#)

=> d 1 l5

L5 ANSWER 1 OF 1 CA COPYRIGHT 2000 ACS
AN 120:57237 CA
TI Preparation of detergent granules by dry neutralization of sulfonic acids
IN Dorset, Andrew; Paquatte, Olivier
PA Procter and Gamble Co., USA
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 555622	A1	19930818	EP 1992-870026	19920214
	EP 555622	B1	19970709		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	ES 2104884	T3	19971016	ES 1992-870026	19920214
	WO 9316154	A1	19930819	WO 1993-US736	19930127
	W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9335955	A1	19930903	AU 1993-35955	19930127
	JP 07503750	T2	19950420	JP 1993-514100	19930127
	CA 2130007	C	19980825	CA 1993-2130007	19930127
	CN 1075332	A	19930818	CN 1993-101600	19930213
	US 5486317	A	19960123	US 1994-284591	19940810
PRAI	EP 1992-870026	19920214			
	WO 1993-US736	19930127			

=> d 1 l5 ab

L5 ANSWER 1 OF 1 CA COPYRIGHT 2000 ACS
AB Dry neutralization of a sulfonic acid (e.g., alkylbenzenesulfonic acid) in
a high-shear mixer by a stoichiometric excess of a particulate neutralizing agent (e.g., Na2CO3) contg. 50 vol % particles having diam. <5 .mu.m gives free-flowing, strong granules which dissolve rapidly in water and give cleaning performance in laundering similar to that of a spray-dried powder of similar compn.

=> d 1-4 l8 ti

L8 ANSWER 1 OF 4 CA COPYRIGHT 2000 ACS
TI Phosphoric acid esters and their use as anionic surfactants for **detergent** compositions

L8 ANSWER 2 OF 4 CA COPYRIGHT 2000 ACS
TI Phosphate ester surfactants and **detergent** compositions containing the same

L8 ANSWER 3 OF 4 CA COPYRIGHT 2000 ACS
TI Removal of manganese from phosphoric acid or acid alkali metal phosphate solutions

L8 ANSWER 4 OF 4 CA COPYRIGHT 2000 ACS
TI Alkali metal phosphates of low vanadium content

L11 ANSWER 154 OF 188 CA COPYRIGHT 2000 ACS
AN 71:23154 CA
TI Particulate **detergent** compositions of low bulk density
IN Reinish, Martin D.; Ouw, Willem B. G.; Rubinfeld, Joseph
PA Colgate-Palmolive Co.
SO S. African, 30 pp.
CODEN: SFXXAB
DT Patent
LA English
CC 46 (Surface Active Agents and Detergents)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI ZA 6702422		19681025		
PRAI US		19660531		

AB Particulate **detergent** compns. of low bulk d. are formed by expanding, with minute bubbles of gas, aq. mixts. of a hydratable builder salt, an alkyl-benzenesulfonate and an olefinsulfonate **detergent**. The latter can be prepd. by reaction of SO3 with olefins and then **neutralizing** with a strong aq. **alkali** or by treating with strong H2SO4 before the last step. Inorg. salts, in a proportion of 10-75% of the compns., may include Form I or II of Na5P3O10, Na2SiO3, Na2SO4, Na2CO3, etc. The H2O content of the compns. may be 15-40%. Methods of forming gas bubbles include use of O-liberating compds., such as H2O2, subjecting the mixt. of the aq. **detergent** to gas, preferably air at 20-50 psi. under high shear, or forming gas bubbles in situ, i.e. by reactions forming steam, or a combination of methods may be used. Thus, an olefinsulfonate was prepd. by reaction of 14 lb. SO3/hr. with 40 lb. of .alpha.-olefin feedstock/hr., then treating the resulting mixt. with 6 lb. of 90% aq. H2SO4/hr. and **neutralizing** with hot aq. **NaOH** to give a sirup contg. 41% solids and 35% anionically active material. The feedstock contg. about 88% terminally unsatd. straight-chain olefins with an av. mol. wt. of 230 and a boiling range of 265-300.degree.C. (11% residue), chain lengths being approx. 24% C15, 29% C16, 30% C17 and 17% C18. The sirup 1629, H2O 57, and 50.degree. Baume aq. **NaOH** 144 parts were blended in a sigma-blade mixer with a cooling jacket. Then, 558 parts tridecylbenzenesulfonic **acid**, contg. **sulfonic acid** 96, free H2SO4 2, H2O 1 and unsulfonated material 1%, was added while the temp. was held at 120-140.degree.F. After **neutralization** of the mixt., anhyd. Na2SO4 466, Na CM-cellulose (74% pure) 49, a fluorescent dye 4.6, and finely divided Na silicate (Na2O/SiO2 ratio 1:2) 82.5% were added to form a uniform slurry at 114.degree.F. Next, 1688 parts anhyd. Na5P3O10 was mixed in rapidly for 1 min. followed by 71.4 parts 35% aq. H2O2 with vigorous mixing. One-half min. after this addn., the paste was discharged into an open vessel and held quiescent in a hot room at 150.degree.F. for 15 min. while the paste expanded to 2-2.5 times its original vol. After holding overnight at room temp., the mass was crumbled and screened through a 10-mesh screen to give a product with apparent d. of 0.34 and contg. H2O 20.4, anionically active olefinsulfonate .apprx.12, and Na tridecyl-benzenesulfonate .apprx.12%.

ST **detergents** low bulk d; alkylbenzenesulfonate **detergents**; olefinsulfonate **detergents**; sulfonates **detergents**

IT Foam
(in low bulk d. **detergent** manuf.)

IT **Detergents**, preparation
(sulfonated, of low bulk d.)

L11 ANSWER 69 OF 188 CA COPYRIGHT 2000 ACS
AN 110:40864 CA
TI Process for the manufacture of **detergent** bars with improved physical properties
IN Kenyon, Ian Rogers; Powers, Peter James; Russell, Peter John
PA Unilever N. V., Neth.
SO Braz. Pedido PI, 15 pp.
CODEN: BPXXDX
DT Patent
LA Portuguese
IC ICM C11D011-04
ICS C11D017-00
CC 46-6 (Surface Active Agents and Detergents)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BR 8705030	A	19880524	BR 1987-5030	19870929
	IN 166806	A	19900721	IN 1987-BO304	19870929
	ZA 8707368	A	19890530	ZA 1987-7368	19870930
PRAI	GB 1986-23425		19860930		

OS MARPAT 110:40864
AB **Detergent** bars, having improved hardness and phys. properties, which contain 7-45% active **detergent** and 0-60% additives, are prepd. by **neutralizing** the corresponding **acid** of an anionic **detergent** with **alkali** in the presence of a drying agent chosen from P2O5 or its oxides, oleum, H2SO4, H3BO3, metaborates, anhyd. Na2SO4, CaO, MgSO4, or their mixts., mixing these materials with optional additives, and forming bars from the mixt. C12 alkylbenzenesulfonic **acids** were mixed with aq. 8.7% H2SO4 soln., water was added, the mixing was continued for 2 min, sufficient Na2CO3 was added to **neutralize** the **sulfonic acid**, the compn. mixed for 10 min, cooled, Na tripolyphosphate added, the mixt. extruded at 80.degree. for 15 min, and the formulation pressed into bars which had excellent hardness properties.
ST bar **detergent** manuf; alkylbenzenesulfonate **detergent** bar manuf
IT **Detergents**
(bars, manuf. of, having improved hardness and phys. properties)
IT 497-19-8, Sodium carbonate, uses and miscellaneous 7758-29-4, Sodium tripolyphosphate
RL: USES (Uses)
(**detergent** bars contg.)
IT 1305-78-8, Calcium oxide, uses and miscellaneous 1314-56-3, Phosphorus pentoxide, uses and miscellaneous 7487-88-9, Magnesium sulfate, uses and miscellaneous 7664-93-9, Sulfuric acid, uses and miscellaneous 7757-82-6, Sodium sulfate, uses and miscellaneous 8014-95-7 11113-50-1, Boric acid
RL: USES (Uses)
(drying agent, **detergent** bar formulations contg.)
IT 98-11-3D, Sodium benzenesulfonate, C12 alkyl derivs., sodium salts
RL: USES (Uses)
(manuf. of **detergent** bars contg.)

L11 ANSWER 68 OF 188 CA COPYRIGHT 2000 ACS
AN 110:175556 CA
TI Manufacture of built **detergent** bars containing salts of fatty acid ester sulfonic acids
IN Sankholkar, Devadatta Shivaji; Ramanan, Ganapathysundaram V.
PA Hindustan Lever Ltd., India
SO Indian, 27 pp.
CODEN: INXXAP
DT Patent
LA English
IC ICM C11D001-28
CC 46-6 (Surface Active Agents and Detergents)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI IN 162637	A	19880618	IN 1985-BO236	19850902

OS MARPAT 110:175556
AB In the manuf. of the title bars, fatty **acid** ester **sulfonic acids** (optionally contg. other **sulfonic acids**) are **neutralized** in a mixt. with a stoichiometric amt. of Na, K, or ammonium **carbonate**, mixed with other **detergent** ingredients such as talc, Na5P3O10, and bleaching agents before, during or after **neutralization**, mixed with addnl. **alkali** comprising **carbonate** or silicate and other **detergent** ingredients, and processed to form bars. Using the stoichiometric amt. of base causes minimal (esp. <15%) hydrolysis of ester groups and gives bars having better lathering properties than bars prepd. with the use of excess **carbonate** during **neutralization** (i.e., causing hydrolysis of >15% of ester groups).
ST fatty ester sulfonic acid neutralization; sulfoalkanoate ester neutralization **detergent**; lathering fatty sulfoalkanoate ester; bar **detergent** fatty sulfoalkanoate ester
IT **Detergents**
(bars, manuf. of, neutralization of fatty acid ester sulfonic acids in)
IT Fatty acids, esters
RL: RCT (Reactant)
(esters, sulfonated, neutralization of, in manuf. of **detergent** bars)
IT 497-19-8, Disodium carbonate, reactions 506-87-6, Diammonium carbonate 584-08-7, Dipotassium carbonate
RL: RCT (Reactant)
(neutralization by, of sulfonated fatty esters in **detergent** manuf.)

L11 ANSWER 66 OF 188 CA COPYRIGHT 2000 ACS
TI Manufacture of laundry **detergent** bars containing linear alkylbenzenesulfonate and builders
AB The title bars, which are hard, long wearing, and low smearing, are prepd. by supplying substantially anhyd. linear C8-16 alkylbenzenesulfonic **acid** to a reaction vessel, **neutralizing** the **acid** with substantially anhyd. **alkali** metal **carbonate** and/or bicarbonate, blending **detergent** builder with the **sulfonate**, and forming bars. The bars contain 5-50% **sulfonate** and 5-85% builder. Any water blended with the **sulfonate** after **neutralization** is in the form of water of hydration of an inorg. salt.
ST alkylbenzenesulfonate builder laundry **detergent** bar
IT **Detergents**
(laundry, bars, contg. alkylbenzenesulfonate and builders, manuf. of)
IT 25155-30-0P, Sodium dodecylbenzenesulfonate
RL: PREP (Preparation)
(laundry **detergent** bars contg. builders and, manuf. of)
IT 497-19-8P, Disodium carbonate, uses and miscellaneous 7722-88-5P, Tetrasodium pyrophosphate 7758-29-4P, Pentasodium tripolyphosphate
RL: PREP (Preparation); USES (Uses)
(laundry **detergent** bars contg. sodium dodecylbenzenesulfonate and, manuf. of)

=> d 66 l11

L11 ANSWER 66 OF 188 CA COPYRIGHT 2000 ACS
AN 110:233670 CA
TI Manufacture of laundry **detergent** bars containing linear alkylbenzenesulfonate and builders
IN Yam, Benny Sin Hoi
PA Procter and Gamble Co., USA
SO Brit. UK Pat. Appl., 23 pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2205580	A1	19881214	GB 1988-12967	19880601
	CA 1333245	A1	19941129	CA 1987-538834	19870604
PRAI	CA 1987-538834		19870604		

=> d 42 l11 all

L11 ANSWER 42 OF 188 CA COPYRIGHT 2000 ACS
AN 121:60262 CA
TI Preparation of anionic surfactant-containing granules by neutralization-granulation process
IN Bauer, Volker; Kischkel, Ditmar; Syldath, Andreas; Peters, Joachim; Kraeplin, Peter; Jacobs, Jochen
PA Henkel K.-G.a.A., Germany
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C11D001-02
ICS C11D011-00; C11D001-37; C11D001-83; C11D017-00
ICI C11D001-02, C11D001-14, C11D001-22, C11D001-28, C11D001-72, C11D003-10, C11D003-12, C11D003-04, C11D003-08, C11D003-20, C11D003-37, C11D003-39
CC 46-5 (Surface Active Agents and Detergents)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4232874	A1	19940331	DE 1992-4232874	19920930
	WO 9407990	A1	19940414	WO 1993-EP2567	19930922
	W: JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 663005	A1	19950719	EP 1993-920800	19930922
	EP 663005	B1	19991201		
	R: AT, BE, DE, ES, FR, GB, IT, NL				
	AT 187200	E	19991215	AT 1993-920800	19930922
	CN 1087945	A	19940615	CN 1993-118176	19930929
PRAI	DE 1992-4232874	19920930			
	WO 1993-EP2567	19930922			

AB Granules having a high anionic surfactant content are prepd. by neutralizing the acid form of the surfactants (e.g., mixt. of alkylbenzenesulfonic acid and H tallow alkyl sulfate) with a powd. neutralizing agent (esp. Na2CO3) with simultaneous granulation and drying, esp. in a fluidized-bed app. The granules (e.g., contg. Na alkylbenzenesulfonate 6.5, Na tallow alkyl sulfate 31.0, and Na2CO3 58.1%) dissolve rapidly in water and are useful in **detergents**.
ST anionic surfactant neutralization carbonate granulation; alkylbenzenesulfonate surfactant neutralization granulation; sulfate surfactant neutralization granulation; sodium carbonate neutralization surfactant granulation; fluidizing anionic surfactant neutralization granulation
IT **Detergents**
(granulation of anionic surfactants for, neutralization by sodium carbonate in)
IT Granulation
(of anionic surfactants, neutralization by sodium carbonate in)
IT Surfactants
(anionic, prepn. of granular, neutralization by sodium carbonate in)
IT 497-19-8, Sodium carbonate, reactions 584-08-7, Potassium carbonate
RL: RCT (Reactant)
(neutralization by, of anionic surfactant, with granulation)
IT 27176-87-0, Marlon AS 3

RL: RCT (Reactant)
(neutralizat[redacted] of, with alkali metal carbona[redacted] granulation and)

IT 25155-30-0P, So[redacted]um dodecylbenzenesulfonate 12[redacted]92-17-7P, Sulfopon T 55
RL: IMF (Industrial manufacture); PREP (Preparation)
(prepn. of granular, neutralization by sodium carbonate in)

IT 7664-93-9D, **Sulfuric acid**, monoalkyl esters, sodium salts
RL: TEM (Technical or engineered material use); USES (Uses)
(surfactants, prepn. of granular, **neutralization** by sodium **carbonate** in)

L11 ANSWER 44 OF 188 CA COPYRIGHT 2000 ACS
AN 120:57237 CA
TI Preparation of **detergent** granules by dry neutralization of sulfonic acids
IN Dorset, Andrew; Paquatte, Olivier
PA Procter and Gamble Co., USA
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C11D011-04
ICS C11D011-00; C11D017-06
CC 46-5 (Surface Active Agents and Detergents)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 555622	A1	19930818	EP 1992-870026	19920214
	EP 555622	B1	19970709		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, PT, SE				
	ES 2104884	T3	19971016	ES 1992-870026	19920214
	WO 9316154	A1	19930819	WO 1993-US736	19930127
	W: AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9335955	A1	19930903	AU 1993-35955	19930127
	JP 07503750	T2	19950420	JP 1993-514100	19930127
	CA 2130007	C	19980825	CA 1993-2130007	19930127
	CN 1075332	A	19930818	CN 1993-101600	19930213
	US 5486317	A	19960123	US 1994-284591	19940810
PRAI	EP 1992-870026	19920214			
	WO 1993-US736	19930127			

AB Dry neutralization of a sulfonic acid (e.g., alkylbenzenesulfonic acid) in a high-shear mixer by a stoichiometric excess of a particulate neutralizing agent (e.g., Na2CO3) contg. 50 vol % particles having diam. <5 .mu.m gives free-flowing, strong granules which dissolve rapidly in water and give cleaning performance in laundering similar to that of a spray-dried powder of similar compn.

ST sulfonic dry neutralization mixer **detergent**; carbonate dry neutralization sulfonic **detergent**; ABS dry neutralization **detergent**; laundry **detergent** sulfonic dry neutralization; particle size carbonate neutralization **detergent**

IT Neutralization
(of sulfonic acid in mixer, in manuf. of granular laundry **detergent**)

IT Particle size
(sodium **carbonate** with small, for dry **neutralization** of **sulfonic acid** in **detergent** manuf.)

IT **Detergents**
(laundry, granular, manuf. of, in mixer, dry neutralization of sulfonic acid in)

IT 98-11-3D, Benzenesulfonic acid, alkyl derivs., sodium salts
RL: USES (Uses)
(**detergent** granules contg., manuf. of, dry neutralization in mixer for)

IT 497-19-8, Disodium **carbonate**, reactions

RL: RCT (Reactant)
(**neutralizat** by powd., of dry **sulfonic acid** in mixer, **detergent**)

=> d 16, 19, 20 l11

L11 ANSWER 16 OF 188 CA COPYRIGHT 2000 ACS
AN 129:17270 CA
TI Neutralization process for making agglomerate **detergent** granules
IN Adams, Donald Scott; Pallares-Galvan, Francisco
PA Procter & Gamble Co., USA
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9820104	A1	19980514	WO 1997-US19165	19971030
	W: BR, CN, MX, TR				
PRAI	US 1996-30610		19961106		

L11 ANSWER 19 OF 188 CA COPYRIGHT 2000 ACS
AN 127:249764 CA
TI Manufacture of high bulk density granular **detergent** composition with good color tone
IN Nakajima, Takashi; Taniguchi, Yoshiyuki; Tanaka, Hitoshi; Ando, Susumu
PA Lion Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09241695	A2	19970916	JP 1996-75161	19960305

L11 ANSWER 20 OF 188 CA COPYRIGHT 2000 ACS
AN 127:236032 CA
TI Manufacture of high bulk density granular **detergent** composition with good storage stability
IN Nakajima, Takashi; Taniguchi, Yoshiyuki; Tanaka, Hitoshi; Ando, Susumu
PA Lion Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09241698	A2	19970916	JP 1996-84581	19960313
	CN 1159479	A	19970917	CN 1997-100690	19970313
PRAI	JP 1996-84581		19960313		

=> d 16, 19, 20 l11 ab

L11 ANSWER 16 OF 188 CA COPYRIGHT 2000 ACS
AB A continuous process for producing agglomerate **detergent** granules comprises (a) grinding **carbonate** selected from Na

carbonate, K **carbonate**, and their mixts., to a freshly ground particul[redacted] **carbonate** having a median par[redacted]le size .apprx.2-50 .mu[redacted], (b) prepg. a mixt. in a high-[redacted]eed mixer by feeding to the mixer (1) .apprx.10-25% alkylbenzene **sulfonic acid**; (2) .apprx.25-60% freshly ground particulate **carbonate**, .gtorsim.10 times the amt. theor. needed to **neutralize** the alkylbenzene **sulfonic acid**; (3) .apprx.5-40% phosphate builder selected from polyphosphates, pyrophosphates, and their mixts.; (4) .apprx.5-50% Na sulfate; (5) 0-10% other surfactants; (6) 0-9% H2O (including H2O in the raw materials); and (7) 0-10% other materials; (c) agglomerating the mixt. from step (b) in a moderate-speed mixer; where the granules produced are substantially free of flow aids selected from silicas, clays, diatomaceous earth, aluminosilicates, perlite, calcite, and mixts. thereof.

L11 ANSWER 19 OF 188 CA COPYRIGHT 2000 ACS

AB The compn. is manufd. by **neutralizing** liq. **acid** **precursors** of anionic surfactants with an **alkali** substance and adding a mixt. contg. fluorescent brighteners, nonionic surfactants and water. Stirring 175 kg Na2CO3 with 5.4 kg water, adding slowly 248 kg straight-chain alkylbenzenesulfonic **acid**, adding a mixt. contg. water 1, Tinopal CBS-X 1, and polyoxyethylene C13- and C15-alkyl ethers 9 parts, cooling to .ltoreq.65.degree., mixing with 284 kg powd. zeolite, pulverizing the mixt. to size 300-1000 .mu.m, and adding 5% heavy Na2CO3, enzyme, and perfume gave a high-bulk d. granular **detergent**.

L11 ANSWER 20 OF 188 CA COPYRIGHT 2000 ACS

AB The process comprises **neutralizing** a liq. **acid** **precursor** of anionic surfactant with a solid **alkali** inorg. substance, where during the **neutralization** air with humidity 0.015 kg-water/kg-dry air is introduced onto the reactants. Slowly adding 248 kg linear alkylbenzenesulfonic **acid** to 175 kg NaCO3 and 5.9 kg water while air with 100% RH (20.degree.) was introduced to the system at 0.007 Nm2/min-kg, mixing with brightener (Tinopal CBS-X)0.55, polyoxyethylene alkyl ether 4.7, water 0.53 kg and zeolite powder 284 kg, pulverizing the mixt. to size 300-1000 .mu.m, and mixing with 5% heavy NaCO3, enzyme and perfume gave a granular **detergent** with storage stability.

L11 ANSWER 9 OF 188 CA COPYRIGHT 2000 ACS
TI Manufacture of **detergent** granulates
AB Granular **detergent** having reduced bulk d. is manufd. by spraying a liq. binder contg. an anionic surfactant acidic **precursor** and an inorg. **acid** to contact a fluidized solid **neutralizing** agent in a low-shear granulator, esp. a gas fluidization granulator. Thus, a liq. binder comprising linear alkylbenzene **sulfonic acid** (LAS) 92.15, **sulfuric acid** 1.14, water 5.5 and impurities 1.14 parts was sprayed onto a particulate compn. contg. sodium **carbonate neutralizing** agent, builder and other additives in a fluidized bed at 45-50.degree. to give granulates with bulk d. 711 g/L.
ST **detergent** granulate manuf fluidized bed bulk density; anionic surfactant acidic solid **neutralizing** agent **detergent** granulate; alkylbenzene **sulfonic sulfuric acid** sodium **carbonate detergent** granulate
IT Bicarbonates
Carbonates, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(alkali metal salts, neutralizing agents; manuf. of **detergent** granulates)
IT Anionic surfactants
(binders; manuf. of **detergent** granulates)
IT Inorganic acids
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(binders; manuf. of **detergent** granulates)
IT **Detergents**
(granular; manuf. of **detergent** granulates)
IT Binders
Granulation
(manuf. of **detergent** granulates)
IT 98-11-3D, Benzenesulfonic acid, linear alkyl esters 7664-93-9, Sulfuric acid, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(binder; manuf. of **detergent** granulates)
IT 98-11-3D, Benzenesulfonic acid, linear alkyl esters, sodium
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manuf. of **detergent** granulates)
IT 497-19-8, Sodium carbonate, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(neutralizing agent; manuf. of **detergent** granulates)

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L11 ANSWER 9 OF 188 CA COPYRIGHT 2000 ACS
AN 130:97194 CA
TI Manufacture of **detergent** granulates
IN De Menezes Sampaio, Bernadete Barreto; Valli, Lazaro
PA Unilever Plc, UK; Unilever N.V.
SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9900475	A1	19990107	WO 1998-EP3670	19980612
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9885390	A1	19990119	AU 1998-85390	19980612
PRAI	GB 1997-13748	19970627			
	WO 1998-EP3670	19980612			

L13 ANSWER 1 OF 14 CA COPYRIGHT 2000 ACS
TI Production of high **bulk density** granular **detergents**

L13 ANSWER 2 OF 14 CA COPYRIGHT 2000 ACS
TI Granular anionic surfactant **detergents** containing fluorescent brighteners with high **bulk density** for cleaning garments

L13 ANSWER 3 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of high **bulk density** granulated **detergents**

L13 ANSWER 4 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of **detergent** granulates

L13 ANSWER 5 OF 14 CA COPYRIGHT 2000 ACS
TI Production method of high **bulk density** granulated **detergent** composition

L13 ANSWER 6 OF 14 CA COPYRIGHT 2000 ACS
TI High-**bulk-density** granulated laundry **detergent** compositions containing polysaccharide-derived polycarboxylic acid builders

L13 ANSWER 7 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of **detergent** compositions with high **bulk density** in high yields

L13 ANSWER 8 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of high **bulk density** granular **detergent** composition with good color tone

L13 ANSWER 9 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of high **bulk density** granular **detergent** composition with good storage stability

L13 ANSWER 10 OF 14 CA COPYRIGHT 2000 ACS
TI Manufacture of granular anionic surfactants and high-**bulk-density** granular laundry **detergent** compositions containing them

L13 ANSWER 11 OF 14 CA COPYRIGHT 2000 ACS
TI High-**bulk-density detergents** and manufacture thereof

L13 ANSWER 12 OF 14 CA COPYRIGHT 2000 ACS
TI Anion surfactants and manufacture of high-**bulk-density detergents**

L13 ANSWER 13 OF 14 CA COPYRIGHT 2000 ACS
TI Process for preparing high-density **detergent** compositions containing particulate pH-sensitive surfactant

L13 ANSWER 14 OF 14 CA COPYRIGHT 2000 ACS
TI Particulate **detergent** compositions of low **bulk density**

L14 12 DRY(2W) NEUTRALI?(P)(ACID# OR PRECURSOR# OR SULPHON? OR SULFON?
OR SULFURIC OR SULPHURIC)(P)(ALKALI OR HYDROXIDE# OR CARBONATE#)
(P)(INORGANIC OR ORGANIC OR PHOSPHORIC)

=> d 1-12 l14 ti

L14 ANSWER 1 OF 12 USPATFULL
TI High active enzyme granulates

L14 ANSWER 2 OF 12 USPATFULL
TI Process for purifying phosphoric esters

L14 ANSWER 3 OF 12 USPATFULL
TI Process for making high active, high density detergent granules

L14 ANSWER 4 OF 12 USPATFULL
TI Process for preparing high density detergent compositions containing particulate pH sensitive surfactant

L14 ANSWER 5 OF 12 USPATFULL
TI Compact detergent compositions with high activity cellulase

L14 ANSWER 6 OF 12 USPATFULL
TI Detergent compositions with high activity cellulase and softening clays

L14 ANSWER 7 OF 12 USPATFULL
TI Process for exchanging inhibitor(s) in olefinically unsaturated systems which are reactive via free radicals

L14 ANSWER 8 OF 12 USPATFULL
TI Dry neutralization process for organic liquid phases

L14 ANSWER 9 OF 12 USPATFULL
TI Gel rooting composition and method

L14 ANSWER 10 OF 12 USPATFULL
TI Process for manufacturing particulate detergent composition directly from in situ produced anionic detergent salt

L14 ANSWER 11 OF 12 USPATFULL
TI Alpha-oxyalkylene amine oxide compounds useful in detergents

L14 ANSWER 12 OF 12 USPATFULL
TI Hetero-imino-prostacyclins